



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,543	04/08/2004	Deshitha Airawana Edirisuriya	1171/40711A/127A-CIP	8375
279 7590 06/22/2009 Trexler, Bushnell, Giangiorgi, Blackstone & Marr, Ltd. 105 West Adams Street Suite 3600 Chicago, IL 60603			EXAMINER WOLFSCHLAGER, JEFFREY MICHAEL	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 06/22/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/820,543

**Applicant(s)**

EDIRISURIYA ET AL.

**Examiner**

JEFFREY WOLLSCHLAGER

**Art Unit**

1791

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6, 12 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6, 12, and 15-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's amendment to the claims filed March 27, 2009 has been entered. Claims 6 and 12 are currently amended. Claims 15-22 are new. Claims 1-5, 7-11, 13 and 14 have been canceled. Claims 6, 12, and 15-22 are pending and under examination.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12, 15, 16, 21 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 12 and 22 recite "permitting movement of the conduit relative to the connector". It is unclear where support for this limitation may be found in the original disclosure. Claim 15 recites the connector is "formed of a hard plastic". It is unclear where support for this limitation may be found in the original disclosure. Claim 16 recites the plastic connector "has a higher melting point than the rubber of the cuff". It is unclear where support for this limitation may be found in the original disclosure. Claim 21 recites the "cuff is injected onto said conduit at a lower temperature than said connector is injected onto said cuff". It is unclear where support for this limitation may be found in the original disclosure. The examiner notes that he has reviewed the paragraphs set forth in the REMARKS that are intended to provide support for these new limitations, but has not found support at these locations or elsewhere in the

Art Unit: 1791

specification. This rejection may be overcome by pointing to the specific location within the specification where support for these limitations may be found or by canceling or appropriately amending the claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Godeau (US 5,749,995).

Regarding claim 20, Godeau teaches a method of producing a watertight coupling between a tube and an endpiece comprising providing a tube (10) made of plastic or elastomer (col. 3, lines 52-54) (i.e. a flexible conduit); injection molding an elastomer/soft rubber onto the conduit adjacent to the end of the conduit to form an annular portion (16)/cuff (Figure 8; col. 5, lines 51-55; col. 6, lines 1-11; claims 3 and 4); and subsequently injection molding a plastic, such as polyamide, over the annular portion (16)/cuff to form a ring (13)/connector (Figure 9; col. 5, lines 15-18), wherein the annular portion (16)/cuff insulates and prevents contact between tube (10)/conduit and the molten plastic where the annular portion (16)/cuff is located (Figure 1).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6, 12 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godeau (US 5,749,995) in view of Uchiyama et al. (US 6,334,615).

Regarding claim 6, Godeau teaches a method of producing a watertight coupling between a tube and an endpiece comprising providing a tube (10) made of plastic or elastomer (col. 3, lines 52-54) (i.e. a flexible conduit); injection molding an elastomer/soft rubber onto the conduit adjacent to the end of the conduit to form an annular portion (16)/cuff (Figure 8; col. 5, lines 51-55; col. 6, lines 1-11; claims 3 and 4); and subsequently injection molding a plastic, such as polyamide, over the annular portion (16)/cuff to form a ring (13)/connector (Figure 9; col. 5, lines 15-18), wherein the annular portion (16)/cuff shields the tube (10)/conduit from injected plastic to prevent damage to the tube/conduit (Figure 1 and Figure 9). Godeau does not teach the plastic is injected at a higher temperature than the melting point of the rubber/elastomer. However, Uchiyama et al. teach an injection molding process wherein a

flexible resin (e.g. an elastomer, col. 4, line 43) and a rigid resin (e.g. a polyamide, col. 3, line 55) are separately injected and wherein the rigid resin is injected at a higher temperature than the melting point of the flexible resin in order to melt the flexible resin at the interface and form a unitary body having a strong fusion bond between the two materials (Figure 22; col. 3, lines 41-50; col. 4, lines 14-22; col. 5, lines 31-40).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Godeau and to have injected the plastic at a higher temperature than the melting point of the rubber/elastomer, as suggested by Uchiyama et al., for the purpose, as suggested by Uchiyama et al., of forming a strong bond between the two materials.

As to claim 12, Godeau employs an elastomer/rubber material for the annular portion (16)/cuff. As such, to the extent set forth in the claim, the material is understood to be deformable, relieve stress and generally permit movement relative to the connector.

As to claim 15, Godeau employs a polyamide, for example, as the ring (13)/connector portion. The ring (13)/connector is compatible with other parts (Figure 1).

As to claims 16 and 17, Uchiyama et al. teach the rigid resin has a melting point higher than the melting point of the flexible resin and inject the rigid resin at a temperature sufficient to cause the cuff to melt at the interface (Figure 22; col. 3, lines 41-50; col. 4, lines 14-22; col. 5, lines 31-40). It would have been obvious to one having ordinary skill to have employed resins having the melting temperature relationship as claimed for the same reasons set forth above in the rejection of claim 6.

As to claim 18, Godeau teach the connector/ring is molded over the cuff/annular portion toward the end of the conduit and the cuff/annular ring extends out of an inner end of the connector away from the end of the conduit (Figure 1 and Figure 12).

As to claim 19, the cuff/annular portion of Godeau prevents contact between the plastic and the tube/conduit behind the cuff/annular portion (Figure 1).

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godeau (US 5,749,995), as applied to claim 20 above, and further in view of Uchiyama et al. (US 6,334,615).

As to claim 21, Godeau teaches the method of claim 20 as set forth above. Godeau do not teach the claimed temperature relationship. However, Uchiyama et al. teach an injection molding process wherein a flexible resin (e.g. an elastomer, col. 4, line 43) and a rigid resin (e.g. a polyamide, col. 3, line 55) are separately injected and wherein the rigid resin is injected at a higher temperature than the melting point of the flexible resin in order to melt the flexible resin at the interface and form a unitary body having a strong fusion bond between the two materials. Additionally, Uchiyama et al. teach the rigid resin has a melting point higher than the melting point of the flexible resin and inject the rigid resin at a temperature sufficient to cause the cuff to melt (Figure 22; col. 3, lines 41-50; col. 4, lines 14-22; col. 5, lines 31-40).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method of Godeau and to have injected the rubber/elastomer and the plastic layers at temperatures corresponding to their melt temperatures such that the cuff is injected at a lower temperature than the connector, as suggested by Uchiyama et al., for the purpose, as suggested by Uchiyama et al., of forming a strong bond between the two materials and for the additional purposes of saving energy by avoiding overheating the resins and avoiding unnecessary heat history/degradation of the resins.

As to claim 22, Godeau employs an elastomer/rubber material for the annular portion (16)/cuff. As such, to the extent set forth in the claim, the material is understood to be deformable, relieve stress and generally permit movement relative to the connector.

### ***Response to Arguments***

Applicant's arguments filed March 27, 2009 have been fully considered, but are moot in view of the new grounds of rejection necessitated by the amendment to the claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY WOLLSCHLAGER whose telephone number is (571)272-8937. The examiner can normally be reached on Monday - Thursday 6:45 - 4:15, alternating Fridays.



Art Unit: 1791

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeff Wollschlager/  
Examiner, Art Unit 1791

June 19, 2009